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## Plant Disease in Kansas

June 28, 2005

Report 5, Volume 31

### **HIGHLIGHTS**

The wheat harvest in the southern parts of Kansas, is winding down. Yields in the south central wheat belt were typically in the mid 30's with test weights below 60 lb. In central Kansas, the wheat was significantly better with test weights above 60 lb. and yields exceeding 45 bushels per acre.

Leaf rust and speckled leaf blotch of wheat both increased in severity in late May and early June and likely increased losses from disease in an already plagued crop.

Ergot in northeast Kansas wheat caused some grain elevators to refuse wheat because of levels which exceeded federal grain inspection standards.

Viral infections of hosta continued to be found at retailers and wholesalers within the state. Most recently, tobacco rattle virus was identified from a wholesaler in Miami County.

In oak stands, Botryosphaeria and smooth canker were identified from sites where oak was in decline.

### **OUTLOOK**

Hot dry weather which has been ideal for wheat harvest should cause decline or death of trees and summer row crops which have root or

vascular diseases. The added stress is more than an unhealthy plant can survive.

## FOREST STANDS

In survey of declining oak stands in Washington (NC) County, *Botryosphaeria* canker and smooth canker were identified. The Bot canker was likely a contributing factor to the decline of one stand where incidence was estimated at about 20% of the trees. Trees had cankered limbs and trunks. The infected tissue was diagnosed by the presence of fungal fruiting structures and sunken or smaller diameter branching (J. Appel).

**Figure 1. Bot canker of oak with fruiting structures**



Smooth canker which is not considered a health factor was identified in stands located in Washington County and also had been observed in surveys of other sites in Kansas.



**Figure 2. Smooth canker of oak with fruiting structures.**

## HOSTA

In an inspection of nursery stock at a wholesaler in Miami (EC) county, viral



symptoms were observed (S. White, KDA). The plants were tested for arabis mosaic, impatiens necrotic spot, tomato spotted wilt, hosta virus x, and tobacco rattle virus. The plants were positive for tobacco rattle virus.

## WHEAT

In late May and early June, leaf rust and speckled leaf blotch were observed in many fields in the central third of the state and in west central Kansas (J. Appel, Bob Buhler, and Bill Hilbert, KDA). Leaf rust which had been struggling, reached 10 to 20 per cent severity of the flag leaf in the last week of grain filling. Speckled leaf blotch reports were confirmed in north central and northeast Kansas and reached the flag leaf toward the end of grain filling also. These late epidemics already compounded a disease plagued year in which stripe rust was moderate to severe in much of Kansas.

In addition, ergot was reported to cause a significant number of refusals of harvested grain at local cooperatives in Jackson, Brown, and Atchison counties (B. Hilbert). The last notable outbreak of ergot was back in the late 1990's. Ergot is favored by prolonged periods of wet and cool temperatures during flowering.

Finally, take all was also observed in early June in wheat fields of Washington, Marshall, and Clay counties. Incidence was minimal.

The National Karnal Bunt Grain Survey is currently in progress. Many thanks to over 350 grain elevators for their participation.